

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (Currently amended) An isolated DNA molecule from a *Thermotoga* species encoding a delta prime subunit of a DNA polymerase III-type enzyme, the isolated DNA molecule hybridizing to the complete complement of SEQ ID NO: 147 under hybridization conditions that are at least as stringent as use of a medium comprising ~~0.9M sodium citrate buffer at a temperature of 37°C~~ 5X sodium citrate buffer and at a temperature of 65°C, followed by washing in 5X sodium citrate buffer at 65°C, wherein the encoded delta prime subunit can cooperate with delta and tau/gamma subunits to form a clamp loader complex.

2. (Original) The isolated DNA molecule according to claim 1, wherein the *Thermotoga* species is *Thermotoga maritima*.

3-5 (Cancelled)

6. (Original) An expression system comprising an expression vector into which is inserted a heterologous DNA molecule according to claim 1.

7. (Original) A host cell comprising a heterologous DNA molecule according to claim 1.

8. (Original) A method of producing a recombinant thermostable delta prime subunit of a DNA polymerase III-type enzyme from a *Thermotoga* species, said method comprising:

transforming a host cell with the heterologous DNA molecule according to claim 1 under conditions suitable for expression of the delta prime subunit, and
isolating the delta prime subunit.

9. (Original) An isolated DNA molecule from *Thermotoga maritima* encoding a delta prime subunit of a DNA polymerase III enzyme, wherein the delta prime subunit is capable of forming a portion of a clamp loader that can cooperate with a DNA polymerase to form a DNA polymerase III-like particle.

10-11. (Cancelled)

12. (Previously presented) An isolated DNA molecule according to claim 1, wherein the delta prime subunit encoded by the DNA molecule is at least 80 percent identical to the amino acid sequence of SEQ ID NO: 148.

13. (Previously presented) An isolated DNA molecule according to claim 1, wherein the delta prime subunit encoded by the DNA molecule is at least 90 percent identical to the amino acid sequence of SEQ ID NO: 148.

14. (Previously presented) An isolated DNA molecule according to claim 1, wherein the delta prime subunit encoded by the DNA molecule is at least 95 percent identical to the amino acid sequence of SEQ ID NO: 148.

15. (Previously presented) An isolated DNA molecule according to claim 1, wherein the DNA molecule is at least 90 percent identical to the nucleotide sequence of SEQ ID NO: 147.

16. (Previously presented) An isolated DNA molecule according to claim 1, wherein the DNA molecule is at least 95 percent identical to the nucleotide sequence of SEQ ID NO: 147.

17. (Previously presented) An isolated DNA molecule that encodes the amino acid sequence of SEQ ID NO: 148.

18. (Previously presented) The isolated DNA molecule according to claim 17, wherein the DNA molecule comprises the nucleotide sequence of SEQ ID NO: 147.

19. (Previously presented) An expression system comprising an expression vector into which is inserted a heterologous DNA molecule according to claim 17.

20. (Previously presented) A host cell comprising a heterologous DNA molecule according to claim 17.

21. (Previously presented) A method of producing a recombinant thermostable delta prime subunit of a DNA polymerase III-type enzyme, said method comprising:

transforming a host cell with the heterologous DNA molecule according to claim 17 under conditions suitable for expression of the delta prime subunit, and
isolating the delta prime subunit.